

RAYHACK® Kienbock Radial Shortening System Caveats

As described by John M. Rayhack, MD | Tampa, FL



- The Kienbock system is available in stainless steel or titanium. The titanium system can be provided upon special request. Always use titanium plates and titanium screws together (stainless plates with stainless screws).
- The median nerve must be protected at all times in this volar approach to the distal radius.
- Pre-bend the Kienbock plate approximately to the original slight concave contour of the volar radius. Use the Pass Through plate benders for this purpose.
- Place the saw guide so it sits just proximal to the volar radial flare. The surgeon may try positioning the previously contoured plate on the volar radial surface prior to applying the saw guide. After assuring the plate will fit properly, the second hole of the plate (from proximal) may be marked with a marker. The saw guide's second hole may then be aligned with this hole to assure proper placement.
- To assure two parallel osteotomy cuts, only saw through the distal slot 50% then proceed with a 50% cut through the proximal slot. Next cut 75% through the distal osteotomy slot and then 75% proximally. Finally complete the distal then the proximal osteotomies in that order. Constantly check the osteotomy visually to confirm two parallel cuts. Protect all soft tissues during this process. Cautiously remove the 3.5mm cortical screws from the saw guide to avoid stripping the hex screw head.
- When compressing the osteotomy be sure to avoid over compression. This will only bend the longer screws in holes #3 and #4. Visually check the osteotomy surface to assure coaptation. If the angled drill guide for the interfragmentary screw does not fit between the compression device, it may be necessary to freehand the interfragmentary screw hole.
- At times it is necessary to loosen the fourth or gliding screw to permit compression of the osteotomy.

- If the compression device is ever eccentrically loaded and locks the compression screws thereby rendering the device inoperable, remove the temporary screws and the compression device. Apply long 3.5 cortical screws. Ensure both cortices are engaged with the screws. This can be confirmed by palpation and/or visually. Manually compress the osteotomy using a Verbrugge or other clamp applied against the 10mm of protruding screws.
- Prior to drilling the interfragmentary screw with the 2.7mm drill bit, visually assure that the angle of the drill across the osteotomy is in the desired position. The surgeon may elect to freehand drill if a different position is desired. Avoid drilling both cortices with the 2.7mm drill bit.
- After drilling the proximal radial fragment with the 2.0mm drill bit and measuring this depth, reapply the angled drill guide to permit the 2.7mm tap to easily find the proximal radial hole for tapping.
- The divergent drill guide permits the two distal screws to diverge. If the surgeon elects to use the handheld drill guide for this purpose it is critical to avoid convergence of these two distal screws.
- Confirm the proper length of the interfragmentary and cortical screws to avoid excessively long screws which may be prominent dorsally and may ultimately require removal. Removal of the hardware is rare in this volar position.
- The patient must be adequately protected and no activity against resistance is permitted until healing of the osteotomy is assured radiographically. Failure to protect the osteotomy until healing is confirmed may result in a delayed or non-union and possible subsequent plate breakage.

Prior to use of the system, the surgeon should refer to the product package insert and surgical technique for complete warnings, precautions, indications, contraindications and adverse effects.



Wright Medical Technology, Inc.

5677 Airline Road
Arlington, TN 38002
901.867.9971 phone
800.238.7188 toll-free
www.wmt.com

Wright Medical EMEA

Krijgsman 11
1186 DM Amstelveen
The Netherlands
011.31.20.545.0100
www.wmt-emea.com